

## **APPENDIX J**

### **EXAMPLE OF MATERIALS RECOVERY AND MARKETING PLAN**

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## **GreenTeam/Zanker**

### **Material Recovery and Marketing Plan**

GreenTeam/Zanker's Material Recovery and Marketing Plan for the SMaRT Station increases the current diversion efforts by adding additional categories of materials (all types of plastics, nylon carpet #6, textiles, and plastic film) and enhanced sorting by installation of an additional manual sorting station on the conveyor currently directing residual to landfill. These activities satisfy the base proposal by processing all diverted recyclable materials at the SMaRT Station.

GreenTeam/Zanker is also prepared to offer additional diversion programs outside the current scope of the proposal. These Enhancement Programs target **food waste, mixed construction and demolition debris, wood and asphalt shingles, and gypsum**. Diversion of these materials provide the opportunity to substantially increase diversion from the Cities but will require either off-site processing or additional source-separated collection programs. GreenTeam/Zanker enhancement programs will increase the overall diversion from the SMaRT Station to **28-32%**.

GreenTeam/Zanker material recovery is illustrated by the following simple bar graphic and detailed material flow diagram.

# SMaRT Material Flow

## Incoming

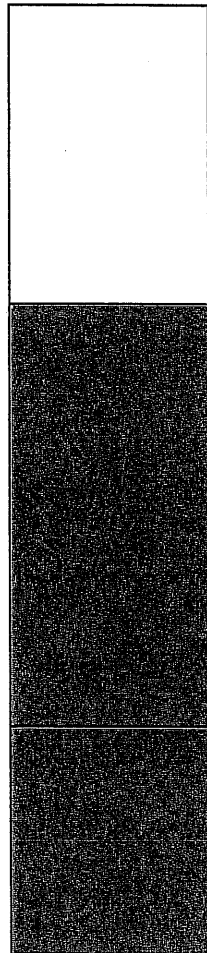
Curbside  
Buyback



MSW Hauler  
Public



Wood/Yard



Landfill

## TO MARKET

Glass- CRV & other  
Aluminum  
Plastic Containers-All types  
Ferrous  
Paper  
Newspaper (ONP)  
OCC  
High Grade  
Office Paper  
Mixed paper  
Metal, scrap  
Carpet, Nylon #6  
Textiles  
Plastic Film  
Dirt, soil  
Wood/Yard Waste  
Compost  
Wood chips  
Soil amendment  
Proposal Enhancement  
Food Waste  
C&D  
Gypsum  
Roofing, wood & asphalt



## OVERVIEW

GreenTeam/Zanker proposes the following methods for materials recovery, processing, sorting, storage, transport, and marketing for the mixed refuse and curbside recycling and any other source separated recycling materials received from the cities:

- Buy-back materials will be separated at the time of delivery and baled or loose packed for transfer to market.
- Curbside materials from the SMaRT city's haulers will be processed through the new curbside processing line.
- Incoming source-separated wood waste and yard trimmings will be directed to the existing Wood & Yard Waste Processing Area.
- Self-haul and mixed commercial/industrial wastes will be directed to the respective designated areas. Self-haul and commercial loads containing some contamination with the majority of the wastes containing wood, yard trimmings will be directed to the designated area for sorting and transfer to the Wood & Yard Waste Processing Area. Incoming mixed refuse will be directed to the conveyer belts for mechanized and manual sorting. In order to increase the opportunity for diversion, GreenTeam/Zanker will install an additional manual sorting station on the conveyor directing waste to landfill.
- Wastes to be landfilled will be loaded into transfer trailers for delivery to the Kirby Canyon Landfill.

Each of these processes is discussed below, followed by a discussion of the storage and processing requirements for each material type. Marketing plans are provided for the each material.

**In addition, the Enhanced Diversion Programs for food waste, mixed construction and demolition debris, roofing materials, and gypsum is presented as a separate section at the end of the proposal.**

## SMaRT PROCESSING AREAS

### Buyback/Drop-off

GreenTeam/Zanker will operate the Public Buyback/Drop-off center. The public users will be directed to place their materials in the designated containers. The buyback attendant will assist the public as necessary to minimize contamination. Materials accepted include:

- All California Redemption Value containers
- Glass containers
- Plastic Containers
- **All Types 1-7<sup>1</sup>**
- Aluminum, containers and scrap
- Metals
- Aseptic Containers
- **Textiles<sup>1</sup>**
- Newsprint
- Corrugated cardboard
- Kraft Paper
- High Grade Office Paper
- Mixed Paper
- Used motor oil
- Used automotive oil filters
- Anti-freeze
- Automotive Batteries
- Sharps from residents

Collected materials will be directed to markets either baled or loose packed. Authorized haulers will be utilized for the household hazardous materials and sharps collected at the buyback center.

### Curbside Materials

Incoming source-separated curbside vehicles will be directed to weigh their loads prior to unloading. It is anticipated that the new curbside recycling line will be installed before the start of the contract. Paper fibers will be unloaded and segregated by collection type until processed by a separate floor conveyor through the new sort line. Residual from the fiber sorting line, containing sufficient divertable material, will be directed to the appropriate sorting area; otherwise, the residual will be targeted for landfilling. Curbside container will be directed to the designated line for sorting into marketable specifications. Residual will be directed to the mixed waste sorting line.

Sorted materials will be stored in bunkers or containers until ready for baling or loose packed for

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<sup>1</sup> These are additional waste categories from the current diverted materials.

market. A discussion of the specific storage and transportation arrangements is presented after the discussion on each areas processing methods.

#### Wood & Yard Waste Processing Area

Spotters will direct incoming loads of source-separated wood waste and yard trimmings to the existing Wood & Yard Waste Processing Area. These materials include: grass, leaves, garden waste, animal manures, plant pruning, tree trimmings, wood roof shingles, lumber, pallets, and similar timber products.

Spotters will inspect the materials for contaminants both prior to unloading and once the material is on the floor. Loads will be directed to either woodchip/fines pile or a pile to be chipped into yard waste to be composted. Material will be pushed onto a floor conveyor that will feed a hammermill-type shredder. A magnet will remove ferrous metal prior to shredding.

Lumber and pallets will be ground and marketed as wood chips. Wood roofing containing no tar paper or other contaminants will also be ground into wood chips. GreenTeam/Zanker's Enhancement Proposal can accept wood roofing containing tar paper for processing at the Zanker Road Facility. The wood and yard waste will be shredded and the fine materials separated from the larger pieces using a disc scalping screen. The shredded material will be fed onto a conveyor and passed under a magnetic cross-belt conveyor, which will pull out any remaining ferrous metals. The waste streams will be deposited into roll-off containers or trailers. Wood chips will be sent to market for decorative purposes, fuel products, or other uses. Chipped yard waste will be directed to GreenTeam/Zanker's Z-Best Composting Facility in Gilroy (Attachment 4). Fines will be marketed as the Z-Best soil amendment. See attachment 5 for Fact Sheet, current and historical analysis.

### Self-Haul and Mixed Commercial/Industrial Waste Processing

Self-haul and mixed commercial/Industrial loads will be directed to the main facility sorting area. After spotters review the contents, incoming loads of self-haul and mixed commercial/industrial waste will be directed to unload at the appropriate location. In addition to the main mixed waste area, the following wastes will be directed to designated piles on the tip floor or containers immediately outside the building:

- Clean wood waste,
- Cardboard,
- Scrap metals and appliances,
- Tires,
- Concrete and other inerts.

In addition to the current materials diverted at the SMaRT Station, GreenTeam/Zanker will divert the following new materials:

- Textiles,
- Plastic film, and
- Nylon #6 carpet.

If accepted, the Enhancement Proposal will also segregate out mixed yard waste, construction and demolition debris, gypsum/wall board, wood roofing, and asphalt roofing.

Appliances containing chlorofluorocarbons will be directed to the holding area to await removal by an authorized service.

Spotters will inspect the incoming waste for the presence of hazardous or other prohibited waste. Haulers will be instructed to remove these special wastes. Hazardous wastes from unknown generators will be characterized and held in the hazardous waste storage container until disposal can be arranged.



Incoming mixed refuse will be directed to the conveyer belts for mechanized and manual sorting utilizing the existing equipment and processing methods. The following materials will be targeted for diversion through this processing equipment: glass, and plastic containers (CRV and non CRV) high-grade, office, mixed, and newsprint paper; cardboard; ferrous and non-ferrous metal, aluminum containers and scrap

### **ADDITIONAL SORTING STATION**

GreenTeam/Zanker proposes to install an additional sorting station on the conveyor returning the residuals to the tipping floor. This modified station will allow a last opportunity to divert wastes prior to landfilling. Materials diverted at this station will include:

- CRV Containers,
- Mixed paper, and
- Cardboard.
- Soiled paper (If Cities approve Enhancement Proposal's Food Waste Composting Program)

GreenTeam/Zanker proposes to install 6 to 8 sorting stations. These materials will be deposited into chutes for return to the processing area bunkers or containers. This new sorting can also be utilized to divert soiled paper to the Enhancement Proposal's Food Waste Program.

### **Landfill**

Residual material from the sorting operations will be loaded into the existing compactor for placement into tared transfer trailers. Trailers will be loaded as close to maximum legal weight as possible. Outgoing loads will be weighed prior to departure.

## STORAGE AND PROCESSING

Diverted material from different processing areas of similar market quality will be consolidated for storage and transport. Materials will be stored on-site until sufficient quantities are collected to justify marketing the materials. Storage and transportation of the materials is as follows:

- Paper fibers will be stores in bunkers, baled, then loaded into seagoing containers
  - Clean wood and yard will be directed to the Wood & Yard Waste Processing Area.
  - Glass will be stores in containers, then loaded into an end dump or transfer trailer
  - Plastic containers will be will be stored in containers, baled, then loaded into transfer containers
  - Aluminum scrap and containers will be stored in a bunker, baled, then loaded into an end dump or transfer trailer
  - Ferrous and Non-Ferrous Scrap metal will be placed into roll-off containers for shipment to processors,
  - Textiles will be loaded into a small box (hopper) for on-site cleaning
  - Nylon #6 Carpet will be segregated from the carpet pile by utilizing testing equipment provided by the vendor. Qualifying carpet will be placed in a debris box prior to shipment
  - Aseptic containers will stored in the cages or other containers prior to shipment.
  - Tires will be stored in containers to await transport to an approved waste tire facility.
  - Clean inerts will be stored in containers prior to transport to processing at Raisch's operation adjacent to the SMaRT Station
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